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ABSTRACT

To determine short-run effects of experimentally imposed leadership roles, a sample of 221 Boy Scouts (aged 10 to 17) was formed into (usually) 4-man teams that competed in 3 skill games. One member of each team was randomly designated as captain, with power to administer and reward. Captains who were leaders in their troops responded to becoming captains with an increased sense of elan. Captains who were not leaders responded with decreased elan; in some cases, withdrew from relating to others; and were ineffective as captains. (These effects were unrelated to team success.) It was concluded that attempting to confer status on a low-status boy through outside intervention is, in the short run, potentially harmful and does not immediately increase achievement motivation. This report contains a literature review; discussions of the subjects, apparatus, procedures, games, use of the Thematic Apperception Test and of adjective checklists related to subjects' self-assessments of such variables as achievement and aggression, subjects' reactions to the experiment and its components, study variables, and statistical analyses; results of statistical analyses in terms of such factors as being a captain and correlates of leadership rank; and instructions given to team captains for playing the games. (Author/GC)

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Social Status Effects on Achievement Motivation

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Morris, Minnesota 56267

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Summary

A sample of 221 Boy Scouts was formed into (usually) 4-man teams which competed in three games of skill. One member of each team was randomly designated as its captain, with powers to administer and reward. All subjects took modified Thematic Apperception Tests and Adjective Check-lists. Captains who were leaders in their troops responded to becoming captains with an increased sense of elan. Captains who were not leaders responded with decreased elan and, in some cases, with withdrawal from relating to others and ineffectiveness as captains. The effects were unrelated to the actual success of their teams. It was concluded that attempting to confer status on a low-status boy through outside intervention is in the short run potentially harmful and does not immediately increase achievement motivation. The data were not designed to generate conclusions regarding longer-run effects.

Social Status and Responses to Experimentally Imposed Leadership Roles: TAT Stories, Self-Descriptions, and Performance[1]

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Since social status influences important aspects of school-related personal functioning, the academic difficulty of lower socioeconomic groups may stem partly from social pressures that discourage competing or excelling scholastically. Possible remedies might take the form of altering the social status of low-ranking pupils, but very little is known concerning the psychological effects of such changes or concerning the major parameters that moderate the effects. The research reported here investigated the way in which becoming the captain of a recreational team affects a boy's TAT stories, self-perceptions, and performance.

The existing literature concerning social status effects on achievement fantasy and performance has been reviewed elsewhere (Klinger & McNelly, 1969). The evidence suggest that values held and social pressures generated by parents (Kahl, 1953) and peer groups (Coleman, 1960; McDill & Coleman) can depress children's performance in school. Such pressures are most characteristic of lower-class groups. Whereas these findings concern pressures to conform to the norms of major social-class subcultures, there is further evidence that even small, relatively homogeneous groups induce a level of performance and aspiration appropriate to the individual's status. Whyte's (1943) account of a Boston "street corner society" vividly illustrates the social controls that enforce performance consistent with status. In the laboratory, Burnstein and Zajonc (1965) found that experimentally manipulated status in small work groups produced corresponding changes in reaction-time performances. Subjects actively sought to maintain their performances congruent with their statuses. When the status was high, increasing failure led subjects to redouble their efforts to succeed; but when their status was low, increasing success led to an adjustment to lower their performances. Subjects appeared to depart from their initially "appropriate" levels of performance only when their groups had first made official changes in their status. Zander and Forward (1968) investigated the effects of status in three-man groups on high school subjects' aspirations for their groups. Although the subjects who scored high in n Ach preferred moderate aspirations regardless of their group status, the subjects who scored low in n Ach expressed relatively unrealistically high or low goals when they were in the low-status peripheral position, but expressed moderate, realistic aspirations like those of the high n Ach subjects when they were moved into high-status, central positions. Thus, aspiration was found responsive to status manipulations.

The findings summarized above, however, leave out some important variables. The field investigations say nothing about the effects of changing a person's status, especially through intervention from outside his group, and the laboratory experiments say nothing about possible interactions between experimental changes of status and subjects' pre-experimental statuses. Furthermore, none of the evidence bears on the effects of experimental status changes on TAT need scores or self-perceptions.

One might expect a number of conflicting effects of changing a subject's status. In the absence of other factors, raising a person's status should alter his fantasy content, self-perceptions, and performance to be consistent with his new status. On the other hand, if the status is imposed by outsiders on members of a pre-existing group with established norms one might expect that elevating low-status subjects would induce a role conflict that might produce other or even opposite effects, such as anxiety, self-devaluation, or reaffirmation of low status. That is, the elevation of a person's status would be engulfed by the ingrained social controls of the pre-existing group.

The present research was designed to provide evidence on these points. Boy Scouts were chosen as subjects because they are psychologically relatively naive, cooperative, and accustomed to engaging in the kinds of competitive team games that provide a useful experimental format for research on experimentally manipulated status. They also normally occupy fairly clearly defined social statuses within the scouting organization. Since the content of Thematic Apperception Test (TAT) stories loosely reflects the story-teller's enduring current social roles (Klinger & McNelly, 1969) and current concerns (Klinger, 1971), subjects were given a modified TAT to assess the responsiveness of TAT content to short-term manipulations of status and to explore the nature of the manipulations used in this research. Since the personality variables that seemed most relevant to status in competitive teams were achievement, power, fear, and self-esteem, the stories were scored for need Achievement, need Power, and Hostile Press, and Adjective Check Lists were administered to assess effects on self-perceptions related to these variables.

Method

Subjects

The subjects were 221 Boy Scouts from thirteen troops in the Ann Arbor, Michigan area, tested while attending Scout camp in the summer of 1970. Their ages at last birthday ranged from 10 to 17 with a mean of 12.8 and a standard deviation of 1.4.

Apparatus

The apparatus consisted of four Lafayette hand dynamometers, modified Thematic Apperceptive Test (TAT) and Adjective Check List forms (ACL; adapted from Gough and Heilbrun [1965]), and the materials for two, team-competitive games, Booby-trap and Satellite. Booby-trap (Parker Brothers) consisted of a board which pushed a spring against the sides of several pegs out of a field of 40 round pegs. In order to score well, players must remove the forward pegs one at a time in such a way that the board that pressed against them moves to other pegs by increments that must not exceed certain maximum distances per move. Satellite (which can be bought commercially as Battle Ship, Parker Brothers) consisted of one small (30.48 cm square) pegboard per player mounted vertically on a stand, 72 pegs per player, and chalk for the player to draw his "ships" on his pegboard. An opponent scores a "hit" on a player's "ships" when one of the pegs he inserts from the back of the pegboard emerges inside one of the chalk-drawn "ships." A chalkboard was used for each pair of competing teams for recording team scores, and each team captain had a clipboard and score sheet for recording the scores of individual players. The teams were competing for prizes of varying value, depending on the honor won, selected from the "Official Boy Scout Uniforms and Equipment Catalog, Spring and Summer 1970."

Procedure

The subjects were randomly assigned to teams of four and one member of each team was randomly designated as that team's captain. They were run in troops, rarely more than one troop at a time, and in those instances where a team consisted of scouts from more than one troop, the boys concerned were sharing a campsite and were living and working together as one troop for the camp's duration.

The experimental sessions were run by two experimenters, E_1 and E_2, in the dining hall on the campgrounds. E_1 visited the individual campsites early in the week and sceduled those troops which were interested in participating in "a study on leadership and team competition," and which had at least four boys, i.e., enough to constitute one complete team. When the subjects arrived at the dining hall, they were first randomly assigned to teams and to team captaincies, and then the teams were randomly paired as competitors in games of skill. Each pair of competing teams sat facing each other across a picnic table, and each team member competed individually with the person sitting across the table from him.

E_1 next explained the role of Team Captain, and how the various prizes could be won:

"The Team Captain's job is an important one. He is responsible for explaining the games to his teammates, and will play an important part in his team's performance in each game. He will handle all the communication between the two teams, the players are not to talk across the table during the games. The Captain will also keep score for his team, keeping track both of how each player is doing and of how his team is doing as a whole.

There is a time limit on each game, so the Captain's most important job will be to keep his team moving quickly through the game since this is how the team will be able to earn the most points. The Captain must also do his own tasks quickly and efficiently since this will also have an important effect on how quickly his team will work as a whole.

We will first explain each game to the Team Captain and then he will come back and explain it to you. As soon as everyone is ready, the game will start. If you have any questions during the game, ask your team Captain. Remember that it is important to follow your Captain's instructions during the game.

We are offering three different types of prizes which you can win, depending on how well each of you performs during the games and on how well you work together as a team.

The first type of prize is for the Best Captain: Since the Captain plays the most important part in his team's performance during the games, the prizes he can win are worth more--he can chose from any fo the prizes we have shown you here (on display are a sleeping bag, back-pack, hatchet, deluxe pocket knife, canteen, air mattress, compass, and flashlight). We are going to be running a total of 48 teams in our study, so there will be 48 team captains in all. From these 48 we are going to select the six best captains, based on how well they do their jobs as captains and leaders, and upon how well their teams do at the games.

The second type of prize is for the Best Team: Based on the teams' scores on the games, and on how well the team members follow instructions and work together as a team, we will select the six best teams from the 48 we use in the study. If your team is selected as one of the six best teams, each team member, including the captain, will be able to choose any one of the prizes here except the back-pack or the sleeping bag.

The third type of prize is for the Most Valuable Player on each team: At the end of the study today, each team captain will tell us which of his three teammates he feels has been the most valuable member of his team. The Captain will base his choice on each player's scores at the games, and on how well each player followed instructions and

worked for the good of the team as a whole. If you are chosen as your team's Most Valuable Player, you can pick from the following prizes we have here: the canteen, air mattress, compass, or flashlight."

Game 1. E_1 next called the team captains up to the head table and explained and demonstrated the first game to them ("Satellite;" Appendix 1). Meanwhile, E_2 distributed the game materials to the team players. The team captains then returned to their respective teams and taught them to play the game (five minutes). At a time designated by E_1 the game commenced and the teams played until told time was up (ten minutes). The teams' scores were then totaled and recorded on the chalkboard by the captains.

Game 2. The team captains were immediately called up to the head table again by E_1. While E_2 collected the first game's materials and distributed those for the second game, E_1 explained Game 2 to the team captains ("Booby-Trap;" Appendix 2) after which the game was played with the same timing as was Game 1, and the materials were then collected.

TAT. E_2 then handed out a "Stories" form and pen to each subject while E_1 read the following instructions out loud:

"We are going to read to you a series of sentences, one at a time. Try to imagine a story based on each sentence, and write your story in this booklet. Tell what the situation is, what led up to the situation, what the people in your story are thinking and feeling, and what they will do. In other words, write a complete story, a story with a plot and characters.

You will have four minutes to write each story. Write your first ideas and work rapidly. I will keep time and tell you when it is time to finish your story and get ready to go on to the next page for the next story.

There are no right or wrong stories or kinds of stories, so you may feel free to write whatever story is suggested to you when you read the sentence. Spelling, punctuation, and grammar are not important.

There is one page for writing each story and the sentence for that story is at the top of the page. I will read the sentence out loud for you when it is time to start the next story. If you need more space for writing any story, use the back of the page for that story."

E_1 then verbally presented the stimulus sentences and the four story cues, one minute apart, for each of the six stories. The six sentence cues were:

1. Two men are standing by a machine. One is older.

2. Two boys playing a game. One is a little ahead.

3. A young man sitting at his desk in a school room.

4. A father and son talking about something important.

5. A boy is working on something in his room. A friend is watching.

6. A boy is thinking while looking out a window.

Game 3. While E_2 collected the TAT materials, E_1 called the captains up and explained Game 3 to them ("Dynamometer;" Appendix 3). "Dynamometer" was both an individual and a team competition, designed to permit a performance comparison between captains and noncaptains. Each team member and captain competed against his opposite number in another team. The objective was to improve one's performance over the first-trial performance more than one's opponent. After the captains had explained the game to their teammates, and the first trial had been completed, E_1 explained to the teams as a whole the team captain's role in, and the scoring of the game.

ACL and Post-Experimental Questionnaire. After Game 3 was completed (15 to 20 minutes) the materials were collected and an ACL Form and pen were given to each subject. E_1 gave the following instructions:

> "This booklet contains a list of adjectives. Please read them quickly and put a check-mark (X) in front of each one that you think describes you as you are right now. Work quickly and do not spend much time on any one adjective. Try to be honest and check those adjectives which describe you as you really are right now."

As each subject completed his ACL, he was given a Post-Experimental Questionnaire designed to assess his reactions to the experimenters, his teammates and team captain, and to the experiment itself.

When the Questionnaires were completed, and each Team Captain had confidentially designated who was the Most Valuable Player on his team, the subjects were dismissed. Prizes were delivered to the campsites the following day.

Variables

The single independent variable was the random assignment or nonassignment of a subject to the captaincy of his team. All other variables were either background variables which describe the subjects before the experiment or dependent variables which were measured after subjects had received their team and captaincy assignments.

Background variables. Information was available for all subjects regarding their age at last birthday, scout rank (pretenderfoot, tenderfoot, second class, first class, star life, and eagle), leadership rank in home troop (no title, assistant patrol leader, patrol leader, assistant senior patrol leader, senior patrol leader, and junior assistant scoutmaster), and functional rank (scribe, quartermaster, etc.). The scout and leadership ranks were coded by assigning zero to the lowest rank of each variable and then increments of one to each successive higher rank. Thus, scout rank could take a value from zero to 6 and leadership

rank from zero to 5. Functional rank was dichotomized as either present or absent.

Father's occupation was known sufficiently for rating purposes for 131 subjects. The occupations were converted to Duncan's Socioeconomic Index (SEI) scores (Reiss, 1961) which correlate .91 with a regression-weighted sum of incomes and educational levels of workers in the occupations. The SEI scores were distributed over the entire range of possible scores (zero to 96) with a mean of 56 and a standard deviation of 30.

TAT variables. The first 16 subjects received four TAT sentence cues and all other subjects received six. The TAT scores of the four-cue subjects were adjusted to their six-cue equivalents. All TAT stories were scored for need Achievement (n Ach; McClelland, Atkinson, Clark, and Lowell, 1953); for need Power (n Power) and its subscales, personalized (p) and socialized (s) power (McClelland & Winter, 1971); and Hostile Press (HoP; Birney, Burdick, and Teevan, 1969). The number of words in each subject's protocol was counted and was used to generate a parallel set of adjusted TAT scores by subtracting a regression-weighted word-count score from each raw score. Including word count, these content analyses thus provided eleven TAT scores for each subject.

ACL variables. The ACL responses were scored and converted to standard scores, which are roughly adjusted for the number of adjectives checked (Gough & Heilbrun, 1965), for the following 22 variables: Total Number Checked (TNC), Affiliation (Aff), Achievement (Ach), Favorability (Fav), Unfavorability (Unfav), Self-Confidence (SCfd), Self-Control (SCn), Lability, (Lab), Personal Adjustment (PerAdj), Dominance (Dom), Endurance (End), Order (Ord), Intraception (Int), Nurturance (Nur), Heterosexuality (Het), Exhibitionism (Exh), Autonomy (Aut), Aggression (Agg), Change (Cha), Succorance (Suc), Abasement (Aba), and Deference (Def).

Other variables. The dynamometer performance yielded two measures, the actual number of pounds of pressure by which subjects improved their performance after the first trial (Dyn) and whether a subject performed better than his individual opponent (Dyn Comp).

Each subject shared his team's success, a variable defined as two points for each team win out of the three games plus one point for each tie.

The Post-Experimental Questionnaire asked subjects, "What did you think of your Team Captain?" From the responses to this question and the experimenters' observations of each captain's effectiveness the experimenters jointly composed a composite evaluation (Eval) of each captain, summarized in ratings on a five-point scale.

Main Statisical Analyses

Pearson product-moment correlation coefficients were obtained for all pairs of variables for as many subjects as gave complete data for each pair. N was 198 for most correlations and 131 for those involving SEI scores. For the 116 subjects for which there were complete data on all variables, three matrices of partial correlation coefficients were obtained, partialing out age or SEI scores or both.

In addition to these correlational analyses, the leadership-rank variable was dichotomized into leaders and nonleaders and was used with the dichotomous captain-noncaptain variable to create two-way, two-by-two analyses of variance and covariance of all other variables, except age and SEI, using methods for disproportionate cell frequencies. There were three analyses of covariance per variable to control for age, SEI scores, and both. The numbers of subjects per cell are reported in Table 1.

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Table 1 about here

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Table 1

Number of Subjects per Cell in Analyses of Variance and Covariance

Analyses	Cell				
	Capt-Leader	Noncapt-Leader	Capt-Nonleader	Noncapt-Nonleader	Total
Variance & age-controlled covariance	23	69	25	81	198
Covariance controlled for SEI or age and SEI	11	37	17	51	116

Results

Being a Captain: Main Effects

Being a captain had very few simple main effects but many complex ones which are discussed below in a section on interactions between captaincy and leadership rank. The significant main effects, uncomplicated by significant interactions, were all on ACL variables: PerAdj, Fav, Aff, Nur, and Agg (Table 2). Despite the nonsignificance of the interactions, it is plain from inspection of the means that the effects tended to fall differently on leaders than on nonleaders. With the exception of Agg, the effect of being a captain was to depress the scores of nonleader captains below the level of the other three groups. The effect persisted even after controlling statistically for variations in age and socioeconnomic status.

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Table 2 about here

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To state this another way, being a captain made no difference on the four variables to the boys who were leaders in their home troops but it lowered the scores of nonleaders. Nonleaders who became temporary captains contrary to their normal roles described themselves as personally less well adjusted, described themselves in less favorable terms, expressed fewer affiliative characteristics, and described themselves as less nurturant to others. The pattern suggests a somewhat dysphoric drawing into themselves, perhaps a tendency toward isolation as a response to their role-inappropriate designation as captain.

The effect of being a captain on Agg scores was somewhat more nearly similar for leaders and nonleaders after adjustment for age and SEI scores. Captains described themselves as more aggressive than did noncaptains. In the case of the raw Agg scores, however, it was primarily the leaders who came to feel more aggressive as a result of being designated captains.

Correlates of Leadership Rank

Appropriately enough, leaders express more power themes in their TAT stories than nonleaders (Table 2). Furthermore, the power imagery that sets them apart from nonleaders is primarily "socialized" rather than "personalized," that is, power employed for the benefit of the group or of society rather than for purely personal gratification. However, TAT n Power is moderately correlated with age ($r=.35$, $p<.01$), as is leadership rank ($r=.45$, $p<.01$), and hence when n Power scores are adjusted for age the relationship between leadership rank and n Power vanishes. Also, TAT n Power is correlated with the number of words subjects wrote ($r=.43$, $p<.01$ [the partial r is .29, controlling for age, $p<.01$]) which is in turn correlated with age ($r=.57$), and hence the relationship between n Power and leadership vanishes when adjusted for TAT Word Count. However, it is debatable whether the number of words written is an artifactual variable that should be partialed out or whether it is itself a reflection of high n Power. In the latter case, partialing out word count would distort the n Power

Table 2

Means of Selected Variables

Variable	Captaincy and Leadership Classification: Capt-Leader	Noncapt-Leader	Capt-Nonleader	Noncapt-Nonleader	SD[b]
TAT					
n Ach[n]	2.7 $_{w}$	2.2 $_{w}$	1.4 $_{w}$	1.9 $_{w}$	4.7
n Pow[m]	5.5 $_{w}$	5.0 $_{wx}$	3.1 $_{x}$	3.7 $_{wx}$	4.1
n Pow[an]	5.0 $_{w}$	4.4 $_{w}$	3.8 $_{w}$	4.1 $_{w}$	4.0
n Pow (s)[m]	2.0 $_{w}$	1.4 $_{wx}$	0.8 $_{xy}$	0.7 $_{y}$	1.9
n Pow (s)[an]	1.9 $_{w}$	1.2 $_{wx}$	1.0 $_{wx}$	0.8 $_{x}$	1.9
Word Count[m]	310 $_{w}$	305 $_{w}$	206 $_{x}$	246 $_{x}$	94
Word Count[aso]	305 $_{wx}$	304 $_{w}$	256 $_{x}$	278 $_{wy}$	82
ACL					
TNC[asm]	63 $_{wx}$	65 $_{w}$	41 $_{x}$	52 $_{wx}$	32.7
Aff[ascli]	45.4 $_{w}$	45.3 $_{w}$	37.0 $_{x}$	43.9 $_{w}$	7.9
Ach[asci]	48.8 $_{w}$	47.5 $_{w}$	42.8 $_{x}$	49.2 $_{w}$	7.3
Fav[asc]	40.5 $_{wx}$	41.0 $_{w}$	33.4 $_{x}$	40.8 $_{w}$	9.3
Lab[asj]	48.1 $^{d}_{w}$	43.3 $^{d}_{wx}$	39.8 $_{x}$	45.1 $_{w}$	7.9
PerAdj[asp]	43.4 $_{wx}$	44.7 $_{w}$	39.0 $_{x}$	43.8 $_{w}$	8.0
Dom[asj]	50.6 $_{w}$	47.6 $_{wx}$	44.6 $_{x}$	49.5 $_{w}$	6.4
Nur[ascl]	44.4 $_{wx}$	46.0 $_{w}$	38.8 $_{x}$	43.5 $_{w}$	8.0
Het[ascj]	50.9 $^{d}_{w}$	47.4 $^{d}_{w}$	38.5 $_{x}$	48.4 $_{w}$	9.4
Exh[asj]	57.1 $_{w}$	52.1 $_{x}$	49.7 $_{x}$	53.4 $_{wy}$	5.7
Agg[i]	56.6 $_{w}$	52.1 $_{x}$	52.7 $_{wx}$	53.4 $_{wx}$	7.2
Agg[asc]	56.6 $_{w}$	50.7 $_{x}$	56.0 $_{w}$	54.4 $_{w}$	7.2
Cha[asj]	49.2 $_{wy}$	44.4 $_{wx}$	41.2 $_{x}$	47.8 $_{y}$	7.1

Table 2 (cont.)

Note.--In any row, means that share a common subscript are not significantly different from each other at the .05 level.

[a] Means adjusted for the age covariate

[b] Square root of the within-cells mean square obtained in the analyses of variance.

[c] Captain main effect significant, $p<.05$

[d] Using the corresponding means of scores that are adjusted for age, the captain leaders differ significantly from the noncaptain leaders. The greater significance in the only-age-adjusted data is attributed to the larger numbers of cases (Table 1).

[i] Interaction significant, $p<.05$

[j] Interaction significant, $p<.01$

[l] Leader main effect significant, $p<.05$

[m] Leader main effect significant, $p<.01$

[n] No effects significant

[o] $p=.06$ for leader effect

[p] $p=.06$ for captain effect

[s] Means adjusted for SEI covariate

scores as a measure of n Power.

Leadership rank is correlated with the length of stories ($r=.39$, $p<.01$) but this relationship becomes nonsignificant when age is partialed out. In a similar vein, leaders checked more adjectives on the ACL than did nonleaders, and this relationship remained after controlling for age and SEI scores.

As a group, leaders described themselves as somewhat more nurturant, but the significance of this relationship as a main effect is probably attributable to the drop in the nurturance of those nonleaders who were made captains. The mean Nur of the noncaptain nonleaders, after adjustment for age and SEI, is quite similar to the mean Nur of the leaders, both captain and noncaptain.

Captaincy and Leadership Rank: Interaction Effects

Most of the ACL variables that were affected at all by captaincy were affected differently for leaders and nonleaders. The interaction effects followed one of two patterns. For Aff and Ach, and though the interaction was nonsignificant here, for TNC, Fav, PerAdj, and Nur, being captain had little effect on leaders' scores but significantly depressed the scores of nonleaders (Table 2). We shall call this the "nonleader shock" pattern. For another group of ACL variables, including especially Lab, Het, and Exh, being captain raised the scores of leaders but lowered the scores of nonleaders. This we shall call the "role consistency" pattern. Dom and Cha scores followed this pattern also, with a significant interaction effect but with the difference between the two leader means falling somewhat short of significance. The TAT n Ach and n Power means showed trends in the direction of the role-consistency pattern but the interactions were in both cases nonsignificant. The interaction effects on the ACL scores described above, which were uniformly highly significant for the role consistency pattern, persisted strongly after covariance adjustment for age and socioeconomic status.

Relationships to captains' evaluations. One interpretation of the nonleader-shock and role-consistency patterns might be that they are attributable to the different degrees of success with which the nonleaders and leaders were able to play their roles as captains. There was, however, no signifcant relationship between leadership rank and evaluations of captains. Most of the captains (35 out of 48) received positive evaluations of their captaincy, but the evaluations of seven captains were neutral and six were negative. The positive and neutral evaluations were about equally divided between leaders and nonleaders. Two leader captains were evaluated negatively compared to four nonleaders. The correlation between leadership rank and Eval was .03.

The existence of nonpositive evaluations permits a limited inquiry concerning the relationship of the ACL Score patterns with captains' evaluations. Since success (Eval) as captain was not, of course, randomly assigned to subjects, any relationship that exists between Eval and ACL scores is purely correlational and hard to interpret.

Such a relationship does seem to exist between Eval and the nonleader-shock pattern (Table 3). The lower a nonleader captain's Eval scores were, for instance, the greater the dip in his Aff scores. Positively evaluated nonleader captains scored nearly as high (using unadjusted means) in Aff (41.5) as the nonleader noncaptains (42.8), whereas the mean of the four negatively evaluated nonleader captains was 28.2, two standard deviations lower. For nonleaders, the correlation between Eval and Aff scores (Table 4) is .49 ($p<.02$). Thus, much of the nonleader-shock pattern in the ACL scores is associated with poor performance as team captain. Since there was only a very weak relationship between the nonleader-shock variables and Eval for the leader captains it seems unlikely that whatever led up to the low evaluations as such produced low Aff or that low Aff as such produced low evaluations. More likely, both are effects of the nonleader captains' role conflicts.

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Tables 3 and 4 about here

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The nonleaders' pattern of declining ACL scores with declining Eval cannot be attributed to an age artifact. First, the age of neutrally evaluated nonleader captains is slightly higher than that of positively evaluated subjects (Table 3). Second, of the nonleader-shock variables only Ach is significantly correlated with age and the correlation is low ($r=.23$, $p<.05$).

In contrast to the nonleader-shock group of ACL variables, Eval scores were related far more weakly or not at all to the ACL variables that reflect role-consistency effects (Tables 3 and 4). Those leaders who received neutral evaluations scored consistently lower than those either positively or negatively evaluated but there was no consistent linear trend. It seems unlikely that the low scores of the neutrally evaluated leaders are due to an age artifact, since Het and Exh, which conform to the pattern, are not significantly correlated with age and the correlations of Dom, Lab and Cha with age are low (.23, .33, and .24, respectively). For nonleaders there was a linear trend of declining Dom and Het scores with declining Eval levels, but the trend was far weaker than in any variable in the nonleader-shock group except Ach.

To summarize these findings concerning teams' and experimenters' evaluations of the captains, the nonleader-shock phenomenon reflects the state primarily of those nonleaders who were unable properly to execute their roles as leaders. Nonleader shock, which is a depression of Aff, PerAdj, Fav, Nur, Ach, and Eval, thus may constitute a general withdrawal from warmth and relating to others, a retreat into oneself amid reduced effectiveness and lowered self-esteem with which some boys responded to their anomalous role as nonleader captains.

The role-consistency phenomenon, on the other hand, in which becoming captain raises Lab, Het, Exh, Dom, and Cha in leaders but depresses them in nonleaders, is largely independent of the evaluations of captains. The increase of leaders' elan and decrease of nonleaders' elan

Table 3

Captains' ACL Scores and their Composite Evaluations

Variable	Leaders' Evaluations			Nonleaders' Evaluations		
	Pos (N=18)	Neu (N=3)	Neg (N=2)	Pos (N=17)	Neu (N=4)	Neg (N=4)
Nonleader Shock						
Aff	43.3	43.7	41.5	41.5	37.2	28.2
Fav	39.1	38.0	36.0	37.9	30.8	24.5
PerAdj	43.3	42.3	34.0	42.5	36.2	31.2
Nur	43.2	46.0	40.0	43.0	40.8	33.0
Ach	46.9	45.3	46.5	43.9	43.5	36.5
Role Consistency						
Dom	48.5	46.7	50.0	44.1	43.0	36.8
Lab	48.3	42.7	57.5	40.1	42.5	36.0
Het	50.4	46.3	56.5	42.5	38.2	36.8
Exh	55.2	46.0	53.5	50.7	46.0	50.0
Cha	49.6	42.7	45.5	41.5	39.0	42.0
Other						
Agg	57.1	53.3	57.0	50.9	53.2	59.5
Age	13.4	12.7	14.0	12.1	12.5	11.5

Table 4

Correlations Between Captains' Eval and ACL Scores

Variable	Leaders (N = 23)	Nonleaders (N = 25)
Nonleader Shock		
Aff	.04	.49 [a]
Fav	.08	.53 [a]
PerAdj	.26	.56 [a]
Nur	.04	.46 [a]
Ach	.05	.37
Role Consistency		
Dom	-.01	.37
Lab	-.20	.15
Het	-.09	.25
Exh	.25	.15
Cha	.29	.02
Other		
Agg	.07	-.39 [a]
Age	-.03	.19

[a] $p<.05$

thus seems to be a largely intrapsychic matter that does not spill over into a captain's judged effectiveness.

Effects of team success. Surprisingly, the leadership rank of captains was unrelated to the success of their teams (r=.16). Evaluations of captains were also unrelated to their teams' success (r=-.18). One might nevertheless suppose that captains' self-reactions on the ACL reflected the relative success of their teams in winning the three competitive games. Not so, however. The success of a team's captain is completely unrelated to his scores on the ACL variables that reflect nonleader-shock or role-consistency effects, whether he is a leader or a nonleader. Thus, neither evaluations nor captains' self-descriptions reflect simply the competitive successes of their teams.

Correlations among ACL variables. The ACL variables involved in the nonleader-shock and role-consistency patterns are plainly not independent of one another (Table 5). In some cases, such as Aff and Fav, the correlations are so high as to render the scales virtually equivalent. For the three variables, Aff, Fav, and PerAdj, that are most central to the nonleader-shock variable, the median correlation is .78. For all five nonleader-shock variables it is .69. The lower correlations in the group are contributed by Ach. However, for the three variables, Lab, Het, and Exh, that are most central to the role-consistency pattern and for the entire role-consistency group of five variables the median correlation is only .33. The median of the correlations between the five nonleader-shock variables and the five role-consistency variables is .35. Thus, it seems reasonable to consider changes in Aff, Fav, PerAdj, and Nur as measuring aspects of an essentially unitary reaction.

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Table 5 about here

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Ach is also highly correlated with Dom (r=.74) and it is possible that the slight difference in their patterns of reaction to captaincy are only fortuitous in these data. Despite some other moderately high correlations between the two clusters of variables, such as between Aff and Het, the two clusters are in general not highly intercorrelated. Aff and Het, though fairly well correlated (r=.58), nevertheless show a different pattern of effects of captaincy on leaders.

The role-consistency group of variables are intercorrelated at a low level and may hence be regarded as reflecting a rather diverse set of reactions to captaincy. Judging from the descriptions of groups scoring high on the variables (Gough & Heilbrun, 1965), they have in common a dimension of self-assertiveness, a willingness to extend themselves outward despite risk, though in several different possible directions.

Relationships with Age and Socioeconomic Status

Age was highly correlated with a number of nontest variables, moderately correlated with some TAT variables, and poorly correlated with ACL vari-

Table 5

Correlations Among Selected Variables

	Nonleader Shock				Role Consistency					
Variables	Fav	PerAdj	Nur	Ach	Dom	Lab	Het	Exh	Cha	Agg
Nonleader Shock										
Aff	.87	.68	.70	.44	.50	.41	.58	.26	.39	.50
Fav		.78	.75	.53	.57	.46	.59	.22	.38	-.52
PerAdj			.72	.37	.40	.35	.49	--	.21	-.57
Nur				.26	.30	.24	.59	--	--	-.52
Ach					.74	.22	.23	.16	.19	--
Role Consistency										
Dom						.26	.33	.34	.27	--
Lab							.41	.28	.51	--
Het								.33	.32	-.29
Exh									.36	--
Cha										--

Note.--All correlations reported are significant beyond the .05 level. N=198.

ables (Table 6). As expected, subjects' leadership and scout ranks and their dynamometer performances were highly dependent on age.

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Table 6 about here

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Although age is significantly correlated with the raw TAT n Power scores, it is most highly correlated with TAT Word Count which is in turn correlated with the TAT n Power scores. When n Power scores are adjusted for length the correlation with age vanishes.

Correlations with SEI scores are remarkably few and low. The low positive correlation with TAT n Ach is consistent with previous findings (Klinger & McNelly, 1969) and it remains significant, though shrinking to a trivial .14, when n Ach is adjusted for Word Count.

It is perhaps particularly noteworthy that SEI scores were unrelated to either leadership or scout rank, suggesting that promotion within these troops was uninfluenced by their social class backgrounds.

Dynamometer Performances

Apart from the correlation of handgrip strength and age, dynamometer performance was significantly correlated with a number of other variables after partialing out age: number of TAT stories scorable (.27), TAT Word Count (.25), ACL Fav (.19), Scn (.28), PerAdj (.25), End (.26), and Ord (.18). Although the correlations are low their construct-recognizability is high. Most of the variables obviously have components of self-control and of motivation to please.

Dyn scores were unexpectedly unaffected by captaincy status and, with age controlled, they bore no relationship to leadership. Nor did captaincy and leadership exert an interactive influence on Dyn.

Table 6

Correlations with Age and Socioeconomic Index

Variable	Age (N = 198)	SEI (N = 116)
Leadership Rank	.51[b]	--
Scout Rank	.60[b]	--
TAT n Ach	--	.22[a]
n Ach (adjusted for length)	--	.14[a]
n Power	.33[b]	--
n Power (p)	.25[b]	--
n Power (s)	.25[b]	
Word Count	.57[b]	--
No. stories scorable	--	-.19[a]
Dynamometer	.51[b]	--
ACL Ach	.20[b]	--
SCfd	.22[b]	--
Lab	.23[b]	.24[b]
Dom	.17[a]	--
Int	--	.20[a]

Note.--Variables described in the Method section and omitted above were not significantly correlated with age or SEI scores, and correlations omitted in the table above were nonsignificant.

[a] $p<.05$

[b] $p<.01$

Conclusions

On Becoming a Captain

The immediate short-run effects of making a boy the captain of his team through outside intervention evidently depend upon his previous status within the group.

If he holds a high status that is compatible with being captain, the effect is to increase his sense of elan, to engage some of the qualities that go with being a leader. In the language of a theory described elsewhere (Klinger, 1971), making a leader a captain engages his leadership "subself." He is moved to assert himself more openly with others, to show off his virtues, to take interpersonal risks, and to seek new experiences.

By contrast, making a low-status boy--a nonleader--into a captain has two deleterious effects. First, it reduces his sense of elan, making him less "leaderlike" than if he had not been chosen. He becomes more cautious, controlled, and eager for continuity and security, and less assertive and intrusive. It is as though he feared the appearance of hubris. Second, becoming captain may shock a nonleader into a withdrawal into himself, a kind of detachment in which he becomes less affiliative or nurturant, more hostile, and less inclined to describe himself in favorable or socially well-adjusted terms. In the process he also alienates his team members and appears to them and others to be ineffective as a captain. It is as though he were reasserting his previous social status by retreating from his captaincy.

It is noteworthy that these effects did not depend on the captain's actual competency or on the success of his team. Rather they appear to depend on his newfound, temporary status as captain and on possible discrepancies between that and his normal status within the group.

These conclusions must be regarded as limited by two important properties of the method. First, the captains were chosen randomly and abruptly by stangers. If captains' status had been conferred nonrandomly by high-status members of the existing groups or if the groups had been manipulated unawares into conferring the status through ostensibly normal channels, it seems likely that the results would have been different. Second, the status of captain was very short-term, lasting less than two hours. If the nonleader captains had been enabled to retain power over an indefinite period, many might perhaps have been able to legitimate their new status. As it was, the captains were not powerless--they had not only administrative powers and responsibilities but also the power of rewarding through selecting their team's Most Valuable Player who would then receive an attractive prize. Nevertheless, the captaincy was only a brief interruption in the continuity of a well-established status system. The data are unable to answer the question: Would people who gained artificial status through external imposition eventually win genuinely respected status after a sufficiently long lapse of time?

Effects on Achievement Motivation

Becoming a captain did not increase achievement motivation by any of the measures available in this study: dynamometer scores, TAT n Ach, or ACL Ach.

Footnotes

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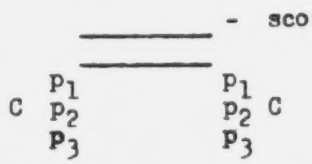
Appendix 1
Satellite: Instructions to Team Captains

Each Captain is responsible for explaining the game to his three team members. If the Captain has any questions, he should ask one of the experimenters.

How the Game is Played

There are four members on each team, a Captain and three players. Teams are competing in pairs, face to face across a table with one player on each team playing against a player on the opposite team. The pairs of teams are arranged as follows: (p=player, sitting at a table; C=Captain, standing behind his team).



First, the Captain fills in on the scoresheet his name, the date, and the name of each of his players according to the diagram above, Player 1 is nearest the Scoreboard, then Player 2, then Player 3.

Then the Captain draws the three ships of each of his players on their pegboards in what he feels are the best positions. A ship is drawn with chalk by drawing a circle around two holes on the front (green side) of a player's pegboard. Next each Captain throws the dice, the team whose Captain gets the highest number shoots first. All three players on that team shoot at once.

To shoot, a player places his pegs in the back of his opponent's pegboard. Each player shoots three pegs of the same color on each Round, one from each of his ships. When all three players of the first team have shot, the other team then shoots in the same way. The first Round is now completed.

Now each Player reports to his Captain any "hits" he has received on his ships. The players do not talk to the players on the opposite team, they report hits only to their own Team Captain. If a player's opponent has placed a peg through one of his ships, he has been hit. The Captain records a hit on a ship by placing an X under one of the three columns labeled "Hits Received" for that player for Round 1. There is one column for each of the player's three ships, so if the same ship is hit twice, the Captain places two X's in the same column: If two ships have each been hit once, the Captain

ROUND	Hits Received XX	XX	XX
1	XX		

places one X in each of two columns:

ROUND	Hits Received XX XX XX
	X X

If no hits are received, the Captain draws a line through these spaces:

ROUND	Hits Received XX XX XX
	~~ ~~ ~~

If one ship has been hit twice, it has been "knocked out" of the game and that player can no longer shoot a peg from it, so he has only two shots left for his next Round, one from each of the ships he has left. When a ship has been knocked out, the Captain shows this on the scoresheet by circling the two X's for that ship under Hits Received.

The two Captains now meet at the scoreboard and tell each other what hits have been received on each team. Each Captain writes the hits his players have scored in Round 1 by putting a circle (O) in one of the three columns on the scoresheet under "Hits Scored" for each player, just as he marked the Hits Received columns.

The Captains now add up the Team Total number of Hits Received and Hits Scored for Round 1, and write these sums in the columns at the right of the score sheet. They should check these sums with each other; the Hits Scored sum on one sheet should be the same as the Hits Received sum on the other sheet.

Now each Captain writes on the Scoreboard the two Team Totals, Hits Scored and Hits Received, for his Team so the Team Players will know how they are doing as a Team in comparison to the other team.

Finally, each Captain goes back to his own Team and tells each player what hits he has scored on his opponent's ships. For each hit he scores, the player places a peg of the same color he shot with into a hole on the base of his pegboard. There are three sets of holes, and the hits scored are marked in them just as the Captain has marked the Hits Scored columns for that player. The player now knows which pegs to shoot around in his next turn in order to knock out a ship he may have hit once.

Now Round 2 starts, and the same team shoots first that did in Round 1. This team will shoot first for each Round for the rest of the game. This Round, and all the Rounds which follow, go just like Round 1 did.

The game is over when one player in each of the three pairs of opposing players has had all of his ships knocked out, or when fifteen minutes is up, whichever comes first. Some players will finish before others, they are to wait quietly until the game is over so that they don't disturb their team mates.

Scoring

When the game is over, the Captain adds up the total number of Hits Received and Hits Scored for each Player and puts these sums on the scoresheet in the bottom row. He also adds up the Team Total Hits Scored and Hits Received. The team in which two or three of the players have more Hits Scored than Hits Received gets Five extra points added to the Team Total Hits Scored column sum.

The Captain then writes the final Team Total scores up on the Scoreboard.

Appendix 2
Booby-Trap: Instructions to Team Captains

The Captains first fill out the information at the top of the score-sheets.

How the Game is Played

The teams are arranged just as they were in Satellite, with the same pairs of players competing against each other, except that now instead of each set of players having their own games, the two teams share one game and the Captains move it from one pair of players to the next.

The game consists of 40 round pegs of three different sizes holding back a board which has a spring pushing against it. When a peg is drawn out the board will probably move. The player must draw out a peg without allowing the board to move more than one unit marked along the edge of the game board. The three different sized pegs have different values: the large red pegs are worth three points, the blue ones are worth two points, and the yellow ones are worth one point.

The gameboard starts out between the two Player 1's. Each Captain throws the dice to see which team starts first. Player one of the team whose Captain got the highest number then makes the first draw. Before each player makes a draw, both Captains must write on the score-sheet in the column headed "Marker Starts At" the number at which the springboard is starting. After each draw the Captains check to see if the springboard has moved more than one unit, for example, if it starts at 3 it must not move beyond 4.

To make a draw, Player 1 first decides which peg he wants to draw, but **before** he can draw it, his Captain must say whether or not he thinks it is a good choice. If the Captain does not think it's a good choice, the Player must choose another peg. This is called the power of "Advice and Consent," that is a player cannot make a draw unless his Captain thinks it is a good one to try.

The player must not touch a peg until his Captain has said it is okay to draw it. If the player touches a peg, he must draw it.

If player one draws out the first peg without letting the springboard move beyond one unit, he may draw out a second peg and if the board still does not move beyond one unit from where it started before his first draw, he can draw out a third peg. The Captain has Advice and Consent power over every peg the player wants to draw out. The player must draw out at least one peg on each turn, but he can "pass" on the second and third draws if he wants to.

After player 1 has finished his turn, the two Captains write down the number of points he has earned. His own Captain writes it in the "Player 1" column, and the other Captain writes it in the "Opponent" column opposite the Player 1 column on his scoresheet. If the board moved beyond one unit while the player was making a draw, the peg he

was drawing out when it moved does not count on his score and is placed in the box in the center of the table. Any peg the player draws without letting the springboard move too far he keeps in front of him and its value is added to his score.

After the Captains have recorded player 1's score, player one on the opposite team takes his turn in the same way, with his Captain having Advice and Consent power over his draws.

When both Player 1's have had their turns, the Captains move the gameboard gently, so as not to set off the spring, over between the Player 2's. These players then make their draws just as the player 1's did, with the same team starting first that did before.

Finally, the Captains move the gameboard over between the Player 3's, who take their turns in the same way. Turn #1 is now completed.

Now the two Captains meet at the scoreboard and check each other's scores as to how many points each player has made. Then each Captain adds up his Team's Total Points and writes this both on the scoresheet and up on the scoreboard so the players can see how they are doing as a team.

The Captains now move the gameboard back between the player 1's, replace all the pegs that were drawn out in Turn 1, and again thrown the dice to see which team's player makes the first draw for Turn # 2. Turn 2 and all the following turns go just as Turn 1 did.

The game is over when fifteen minutes are up, so the Captains will want to keep the game moving quickly in order for each team to get as many points as possible.

Scoring

When the game is over, the Captain adds up the scores of each of his players and writes this in the bottom row on the scoresheet. Any turn that was not completed, that is, in which all of the players on both teams did not get to make a draw, is not counted at all.

The Captain then adds up the Team's Total Points. The team in which two or three of the players got more points than their opponents gets five extra points added to the Team's Total Points sum.

The Captains then check their final team totals against each other and then write these scores up on the Scoreboard.

Appendix 3
Dynamometer--Instructions to Team Captains

How the Game is Played

The teams are arranged in pairs as they were for the first two games. Again, each pair of competing teams uses the same equipment and the Captains move it down the table. This time, however, the Captains also play the game, competing against each other just as their team mates have been doing.

The equipment is an object called a Hand Dynamometer which measures how strong your hand grip is. The player holds the dynamometer in his hand and squeezes. A needle on the dial will go up to the number showing the strongest point of his squeeze, and it will stay there until it is turned back to zero manually by the Team Captain after he has read the player's score.

This game will be played much like Booby-trap was. The Captains will start the dynamometer out between the two Player 1's, and they will toss the dice to see which team starts first. Then Player 1 of that team will take the dynamometer in his dominant hand, that is the one he writes with, holding it so that the dial is turned inwards towards his hand. He will put his forearm straight out on the table in front of him and squeeze the dynamometer once as hard as he can. Then he'll give it to his Captain who will record his score for Trial 1 on the scoresheet in the "Player 1" column.

There are two sets of numbers on the dial, an upper one which goes from 20 to 420, and a lower one which goes from 20 to 140. The Captain will record only the number on the lower scale, we are not interested in the upper dial. He will then give the dynamometer to the other Team Captain who will also record the score, in the "Opponent" column opposite Player 1 on his scoresheet.

This Captain will then reset the needle to zero, by putting it all the way to the left, and then hand the dynamometer to Player 1 on his team who will squeeze it just like the other player did. He will then give it to his own Captain who will record his score and give it to the other Captain who will also record the score and then reset the needle to zero.

The two Captains will now move over behind the Player 2's. The Player 2's and 3's will then take their turns squeezing the dynamometer just the same way.

After the Player 3's have had their turn, the Captains will sit down across from each other and each squeeze the dynamometer, just as their team mates have done. They will each record his own and the other's score in the columns to the right on the scoresheet. The first trial is now finished.

When all the Teams have finished Trial 1, we will explain the rest of the game.

P. 2 -- Dynamometer Instructions

What we want to see in this game is how much harder each team member can squeeze the dynamometer than he did in Trial 1. Each Team member will try to improve more over his own score in Trial 1 than his opponent does. For each player that improves more than his opponent, the team will get five points. Whichever Captain improves more than the other one will earn his team ten points.

The Captains will write everyone's Trial 1 scores in the four rows on the score sheet labelled "Trial # 1 Score." Then Trial 2 will go just like Trial 1 did. After Trial 2 is finished, the Captains will subtract each player's score in Trial 1 from his score in Trial 2 to see how much better he did. If the score for Trial 1 is bigger than the score for Trial 2, that is if the player didn't do as well in Trial 2 as he did in Trial 1, then the Captain will put a zero in the "Difference" row for that player in the scoresheet.

After the Captains have subtracted everybody's scores, they will go back and circle the larger of the two difference scores for each pair of competing players. This will be the player who improved the most for each of the pairs. The Captains will then count up the number of points their Team has earned for that trial and write this in the Total Team Points Column on the Scoresheet. For each of his players who got a larger number in the "Difference" column than his opponent did, the Captain will give his team five points. If the number in the Captain's own "Difference" column is larger than his opponent's, he will give his team ten points. The total number of points for both teams together should be 25 unless there is a tie. If two players get the same number in the "Difference" column, each team is given two points. If the Captains get the same score, each team is give five points.

After they have figured out the points, the two Captains will check each other's work and then each Captain will write his Team's Total Points for that Trial up on the scoreboard.

Then the Captains will go back to their teams and tell each player how he is doing in relation to his opponent.

Now Trial 3 will begin. Trials 3, 4, and 5 will go just like Trial 2 did.

After Trial 5 is finished, the Captain will figure out the total number of points each player has earned for his team and will write this on the bottom row of the scoresheet. He will also figure out the Total Team points from Trials 2, 3, 4, and 5 and will write this number up on the scoreboard to see which team won.

Again, the Captains will want to keep the game moving quickly since there will be a time limit.